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UNITED STATES DEPARTMENT OF AGRICULTURE  
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Bureau of Entomology and Plant Quarantine

INSECT PEST SURVEY

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× STATUS OF THE WHEAT STEM SAWFLY IN THE  
NORTHERN GREAT PLAINS IN 1948 ×

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A survey was conducted during the fall of 1948 in the northern Great Plains by the Bureau of Entomology and Plant Quarantine, in cooperation with the North Dakota Agricultural Experiment Station, to obtain definite information on the abundance and distribution of the wheat stem sawfly (Cephus cinctus Nort.). The territory surveyed included all of Montana east of the Rocky Mountains, all of North Dakota, and the north-central part of South Dakota.

The survey was made by examining 10 well-distributed wheatfields in each county. Four samples, consisting of 25 wheat stems each, were examined in each field. The first sample was taken in the center of the first rod at the edge of the field; the second sample, in the center of the second and third rods; the third sample, in the center of the fourth, fifth and sixth rods; and the fourth sample, in the center of the seventh, eighth, ninth, and tenth rods. The average percentage of infestation for each field was computed by weighting the percentage of stems found infested in each sample by the number of rods each represented and dividing the sum by 10. The individual field averages were used in preparing the accompanying map showing the area surveyed and sawfly abundance therein.

As shown on the map and in table 1, the most heavily infested areas were in northwestern North Dakota, northeastern Montana, and northwestern Montana east of the Rocky Mountains. A considerable area in North Dakota was found to be heavily infested. In general, infestations were light throughout the remainder of the surveyed territory. In sampling only 10 fields per county, small, isolated, locally heavy infestations may have been missed.

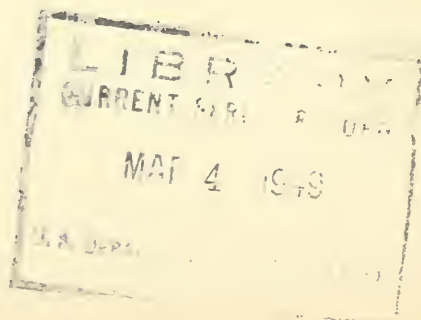


Table 1.--Wheat stem sawfly infestations by counties showing the minimum and maximum individual field infestations found and the average for all fields sampled in the county. 1/

State and county	Percentage of stems infested			State and county	Percentage of stems infested		
	mini-mum	maxi-mum	average		mini-mum	maxi-mum	average
Montana:				Montana: (cont.)			
Bighorn	0	7	1.8	Sweetgrass	0	0	.0
Blaine	0	0	.0	Teton	0	12	2.1
Carbon	0	2	.2	Toole	0	37	6.4
Carter	0	0	.0	Treasure	0	2	.2
Cascade	0	0	.0	Valley	0	13	1.9
Choteau	0	2	.3	Webaux	0	0	.0
Custer	0	2	.5	Wheatland	0	1	.1
Daniels	0	18	5.9	Yellowstone	0	Tr.	Tr.
Dawson	0	22	2.7				
Fallon	0	Tr.	Tr.	North Dakota:			
Fergus	0	2	.2	Adams	0	4	.4
Garfield	0	0	.0	Barnes	0	1	.1
Glacier	0	2	.7	Benson	0	3	.4
Golden Valley	0	8	1.0	Billings	0	0	.0
Hill	0	Tr.	Tr.	Bottineau	0	40	16.1
Judith Basin	0	0	0.0	Bowman	0	2	.3
Liberty	0	5	1.2	Burke	0	76	27.2
McCone	0	0	0.0	Burleigh	0	10	3.0
Meagher	0	0	0.0	Cass	0	0	.0
Musselshell	0	1	.1	Cavalier	0	Tr.	Tr.
Park	0	0	.0	Dickey	0	0	.0
Petroleum	0	0	.0	Divide	Tr.	79	21.3
Phillips	0	Tr.	.1	Dunn	0	1	.1
Pondera	0	16	2.7	Eddy	0	3	.6
Powder River	0	4	.5	Emmons	0	Tr.	.1
Prairie	0	0	.0	Foster	0	2	.4
Richland	0	2	.4	Golden Valley	0	2	.2
Roosevelt	0	7	1.9	Grand Forks	0	1	.1
Rosebud	0	0	.0	Grant	0	3	.3
Sheridan	0	8	1.8	Griggs	0	1	.1
Stillwater	0	7	1.2	Hettinger	0	0	.0



Table 1.--(Continued)

State and county	Percentage of stems infested			State and county	Percentage of stems infested		
	mini-mum	maxi-mum	average		mini-mum	maxi-mum	average
North Dakota: (cont.)				North Dakota: (cont.)			
Kidder	0	4	.5	Stark	0	Tr.	Tr.
LaMoure	0	2	.2	Steele	0	4	.6
Logan	0	2	.2	Stutsman	0	4	.4
McHenry	0	13	2.2	Towner	0	0	.0
McIntosh	0	0	.0	Trail	0	0	.0
McKenzie	0	3	.4	Walsh	0	2	.3
McLean	0	40	12.1	Ward	4	50	24.6
Mercer	0	3	.4	Wells	0	14	2.1
Morton	0	1	1.0	Williams	Tr.	11	4.6
Mountrail	1	74	19.8	South Dakota:			
Nelson	0	3	.4	Cambell	0	0	.0
Oliver	0	11	1.7	Carson	0	1	.1
Pembina	0	0	.0	Dewey	0	2	.3
Pierce	0	39	8.2	Edmunds	0	Tr.	Tr.
Ramsey	0	2	.3	Faulk	0	Tr.	Tr.
Ransom	0	2	.2	McPherson	0	0	.0
Renville	2	71	31.6	Meade	0	4	.5
Richland	0	Tr.	.1	Perkins	0	2	.2
Rollette	0	2	.5	Potter	0	0	.0
Sargent	0	3	.9	Walworth	0	0	.0
Sheridan	0	14	4.4	Ziebach	0	0	.0
Sioux	0	1	.2				
Slope	0	1	.1				

1/ Tr.= Trace (less than 0.5 percent of the stems infested.)





# WHEAT STEM SAWFLY SURVEY, FALL 1948

